



BAHIA GRANDE

The Largest Estuary Restoration In North America

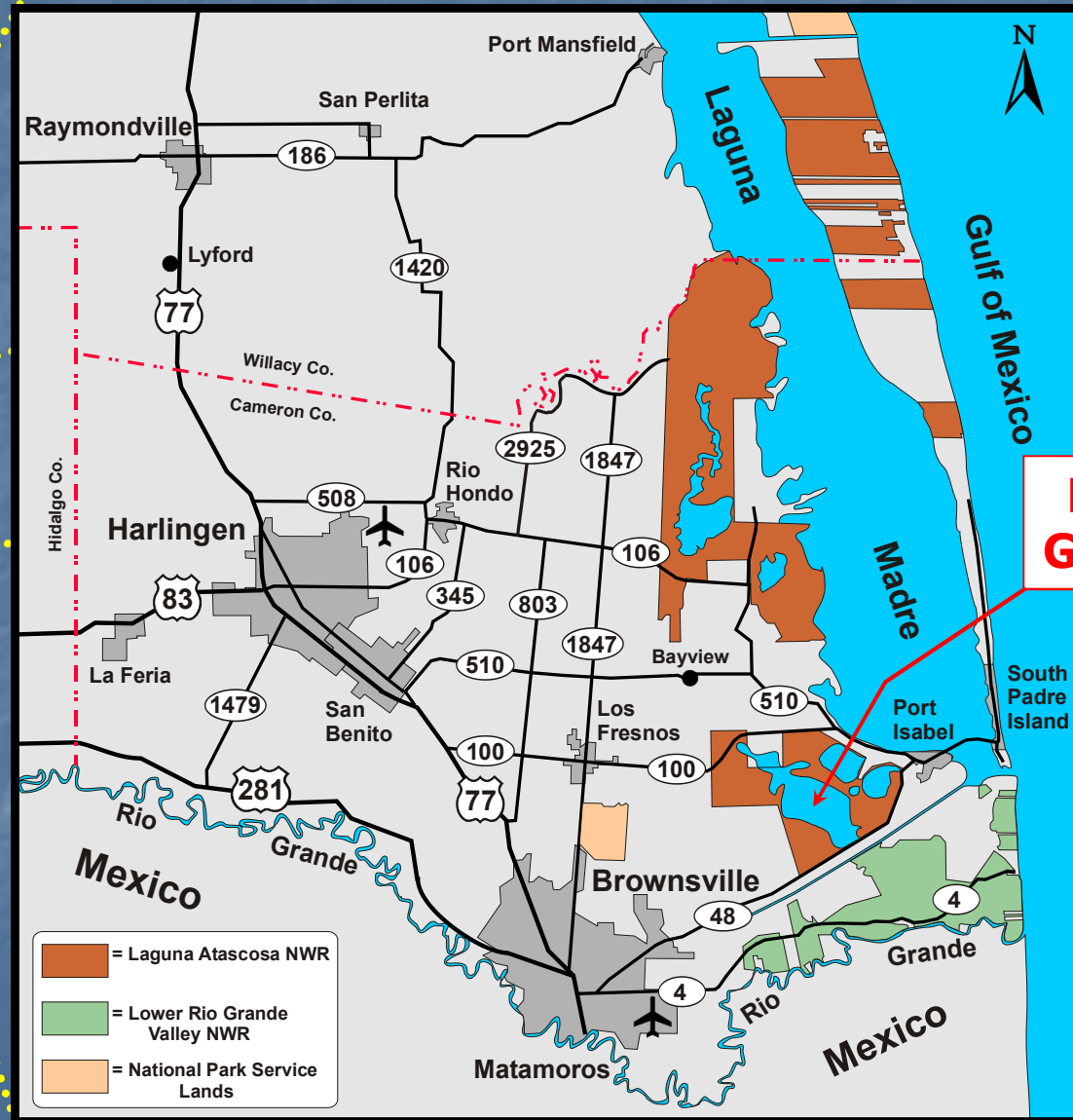
A Public Private Partnership in Conservation

USFWS, Cameron County, Texas Department of
Transportation, NOAA, Laguna Atascosa National
Wildlife Refuge, Brownsville Navigation District

UTB/TSC & Ocean Trust Texas



Bahia Grande Location Map



**BAHIA
GRANDE**

Bahia Grande

General Facts

- 21,763 acres of habitat (10,000 acres of potential wetlands)
- Former productive estuary for fish, wildlife and waterfowl
- Cut off from tidal water in 1930s, now a barren dust bowl
- USFWS acquired 1999 – 2000 and now part of in Laguna Atascosa National Wildlife Refuge



Old trestle pilings from historical
Rio Grande Railroad

Bahia Grande Restoration Will Create

NURSERY & HABITAT for fish and shellfish...



**Episcopal Day School students
restoring Mangrove habitat**

**Bahia Grande was once a
productive bay with shrimp
and large populations of
crabs, flounder, and oysters**



Bahia Grande Restoration Will Establish

***TIDAL EXCHANGE*...eliminating dry basins
and total evaporation of Bahia Grande**

***2004 Fish Kill of 19,000 in
the Bahia Grande Basin
(14,100 redfish - \$812,000
replacement cost)***

***500,000 estimated total in
the Little Laguna Madre
basin (90% mullet & 10%
redfish)***



Bahia Grande Restoration Will Create

***WETLAND HABITAT
for resident & migratory
wildlife & waterfowl***



Early hunters would pass
shoot ducks that flew
between Bahia Grande
and San Martin Lake

Bahia Grande Restoration Will Provide

***DUST REDUCTION impacting local
communities of...***



Port Isabel, Laguna Heights,
Laguna Vista & highway
travel on Highway 48

Bahia Grande Restoration Will Provide

PUBLIC RECREATION *(wildlife-dependent recreation)*



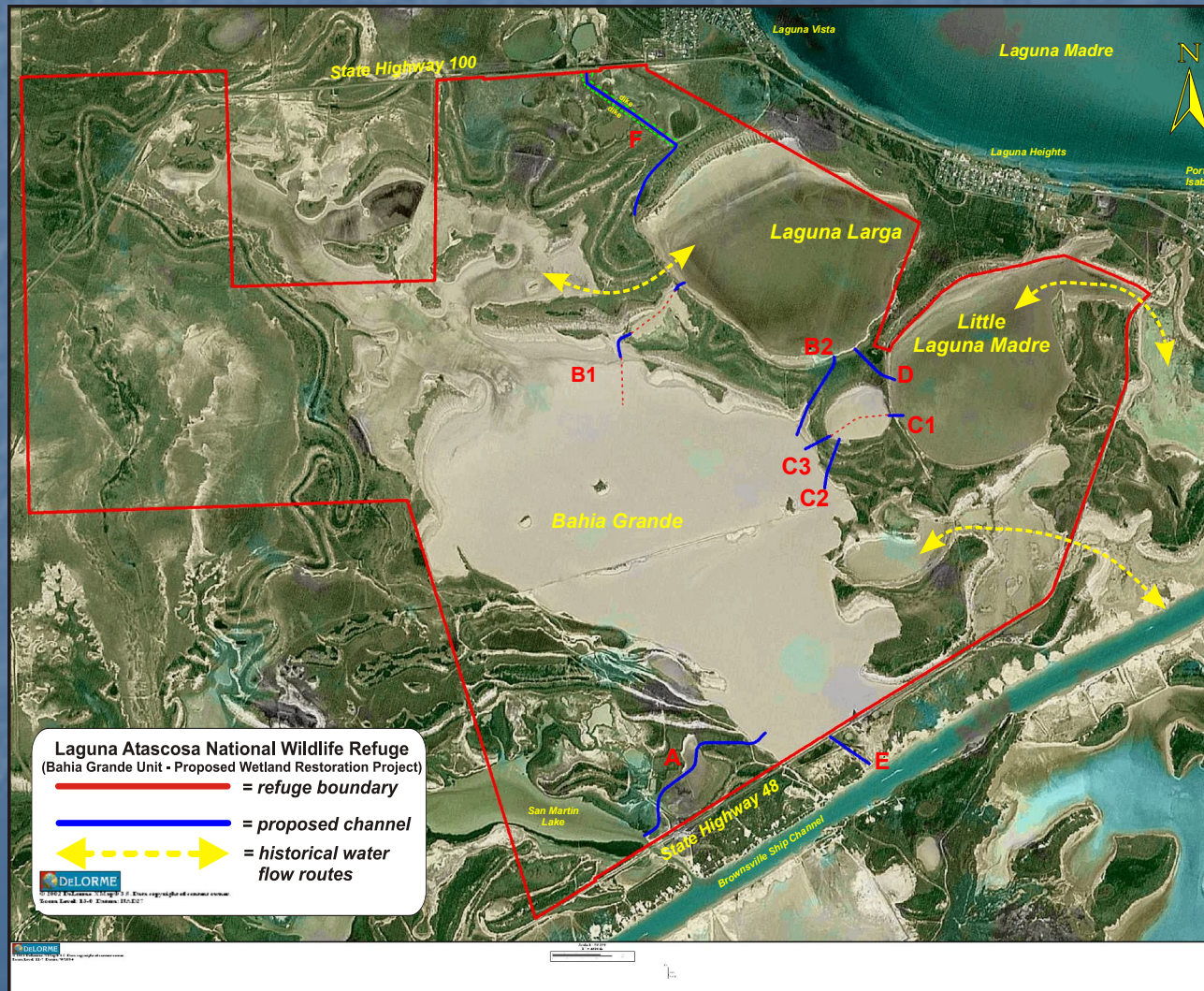
Waterfowl Hunting



**Kayaking for fishing or
wildlife observation**

HOW DO WE RESTORE AN ESTUARY?

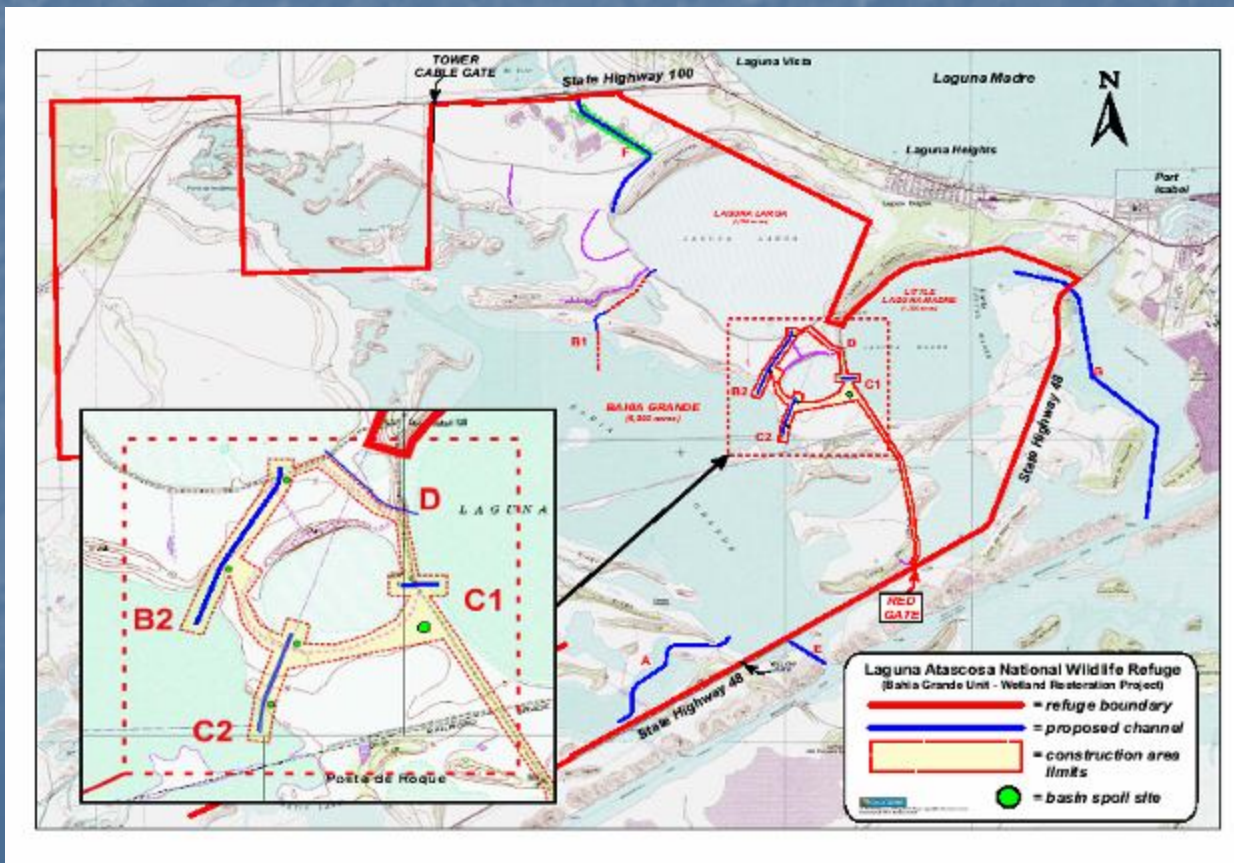
Three Channel Connections (Interior, Vadia Anche & Main Channels) and coordinated restoration activities



THE INTERIOR CHANNELS

Bahia Grande, Laguna Larga & Little Laguna Madre

- Channel B - 3,700 ft. x 60 ft. wide, -2 feet MSL
- Channel C - 2,775 ft. to 4,940 ft. x 60 ft. wide, -2 ft MSL



VADIA ANCHA

Brownsville Ship Channel, Little Laguna Madre

- Channel G - 14,500 ft. x 30 ft. wide, -1 ft MSL



**PROPOSED CONNECTING CHANNEL
BROWNSVILLE SHIP CHANNEL TO VADIA ANCHA**

THE MAIN BND CHANNEL

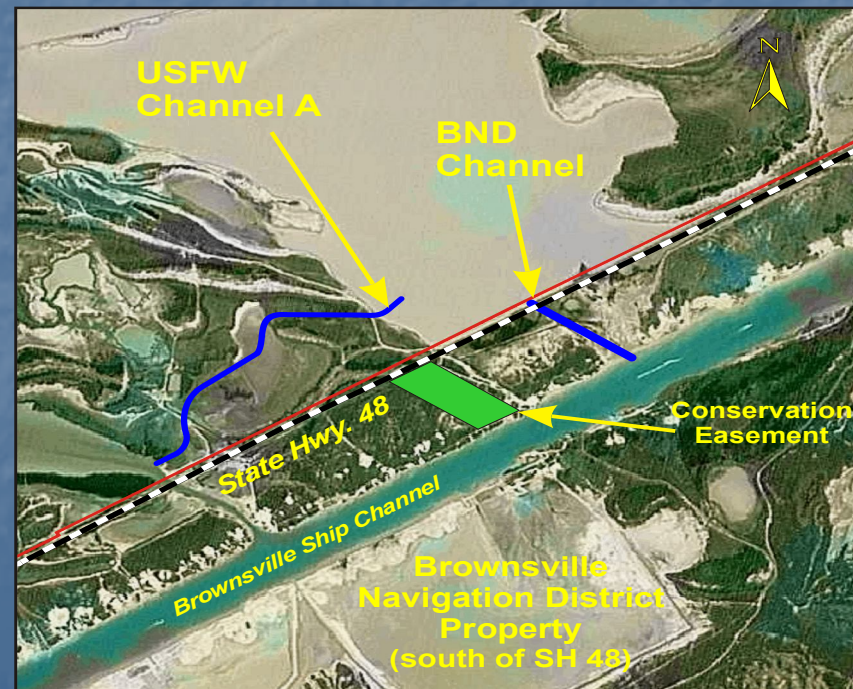
- Channel E – 2,300 ft. x 150 ft. wide, -9 ft. MSL

- Pilot Channel

July 16, 2005, BND and Cameron County open a pilot channel connecting the Bahia Grande basin to the Brownsville Ship Channel and the Gulf of Mexico, the first step in restoring Bahia Grande

- Conservation Easement HWY 48 Wildlife Crossing

(1,000 ft. wide by 2,900 ft. long)



THE MAIN BND CHANNEL

- Pilot Channel - 2.5% tidal exchange/2 mil cu ft/tide
(Salinity > 100 ppt with no significant plant & animal survival)
- Main Channel - 32% tidal exchange/90 mil cu ft/tide



"PILOT" CHANNEL

15-FOOT BOTTOM WIDTH, -3 FEET BELOW MEAN SEA LEVEL)

APPROXIMATE COST: \$90,000.00



"MAIN" CHANNEL

150-FOOT BOTTOM WIDTH, -9 FEET BELOW MEAN SEA LEVEL)

APPROXIMATE COST: \$700,000 TO \$1.4 MILLION

COORDINATED RESTORATION

TXDOT HWY 48 Expansion \$3M

- 256' Main Channel Bridge
- 40' Wildlife Crossing
- Wildlife Observation Tower Parking area
- Installed culverts on Hwy 48 for Vaida Ancha Channel



Native Plant Restoration

- UTB/TSC Greenhouse
- Bahia Grande Field Nursery



Baseline Monitoring

- UTB/TSC & TAMU - College Station
- UTPA & TAMU - Corpus Christi
- Bahia Grande Research Field Station



BAHIA GRANDE

HWY 48



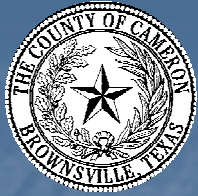
BAHIA GRANDE

HWY 48



Pilot Channel





Help Restore Bahia Grande in the



Laguna Atascosa National Wildlife Refuge Cameron County, Texas

Bahia Grande 60+ Partners Recognized
Nationally with Department of Interior
Cooperative Conservation Awards



For more information:
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